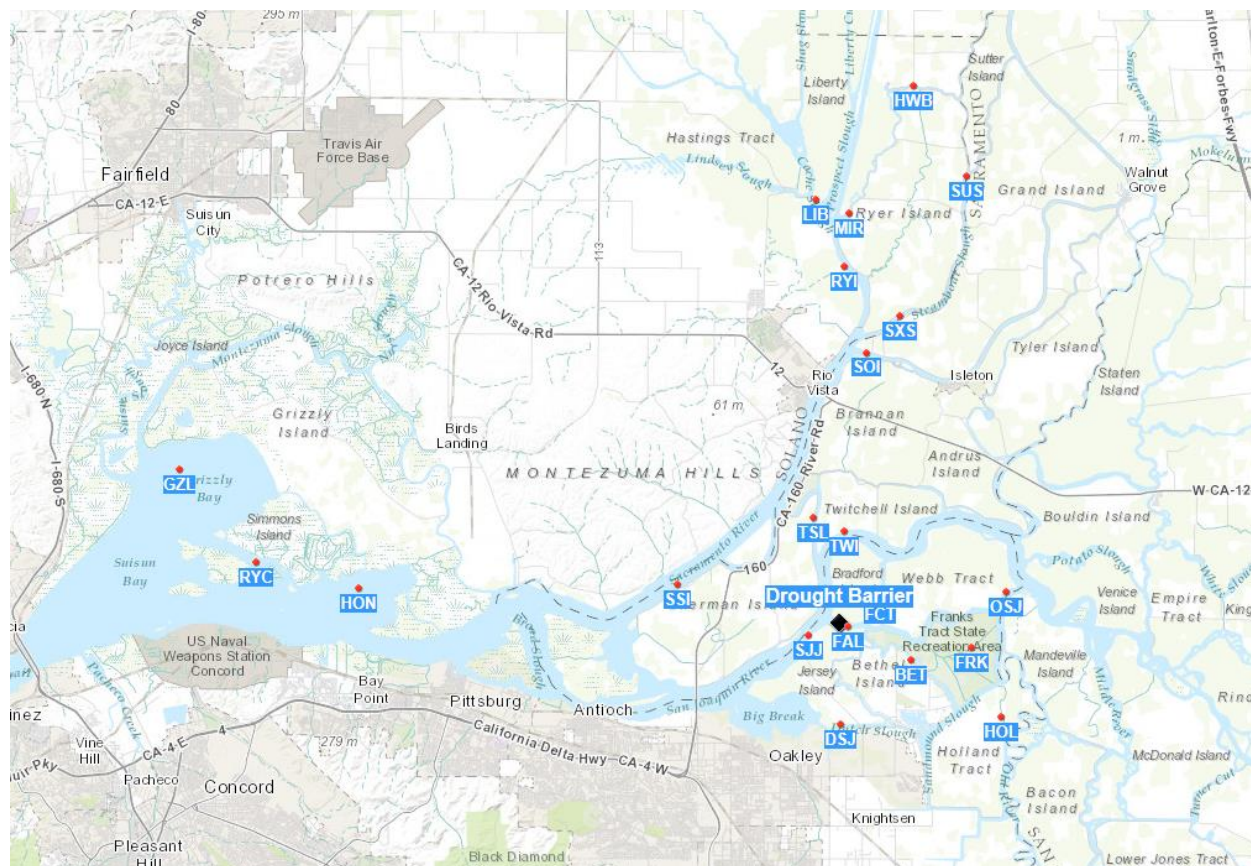


Emergency Drought Barrier Water Quality Monitoring Summary ¹

Weekly Update for July 6 through July 12, 2015

Below is a summary of water quality, flow, and velocity data since the hydraulic closure of the Emergency Drought Barrier (EDB) at West False River on May 28, 2015, with emphasis on trends observed during the past week. The EDB rock placement was completed on June 12, 2015. For additional water quality monitoring data, access the network of CDEC stations at the following link:

<http://dwr.maps.arcgis.com/apps/Viewer/index.html?appid=3be5e0bbe0994b76883b0567f4f6b9e3>



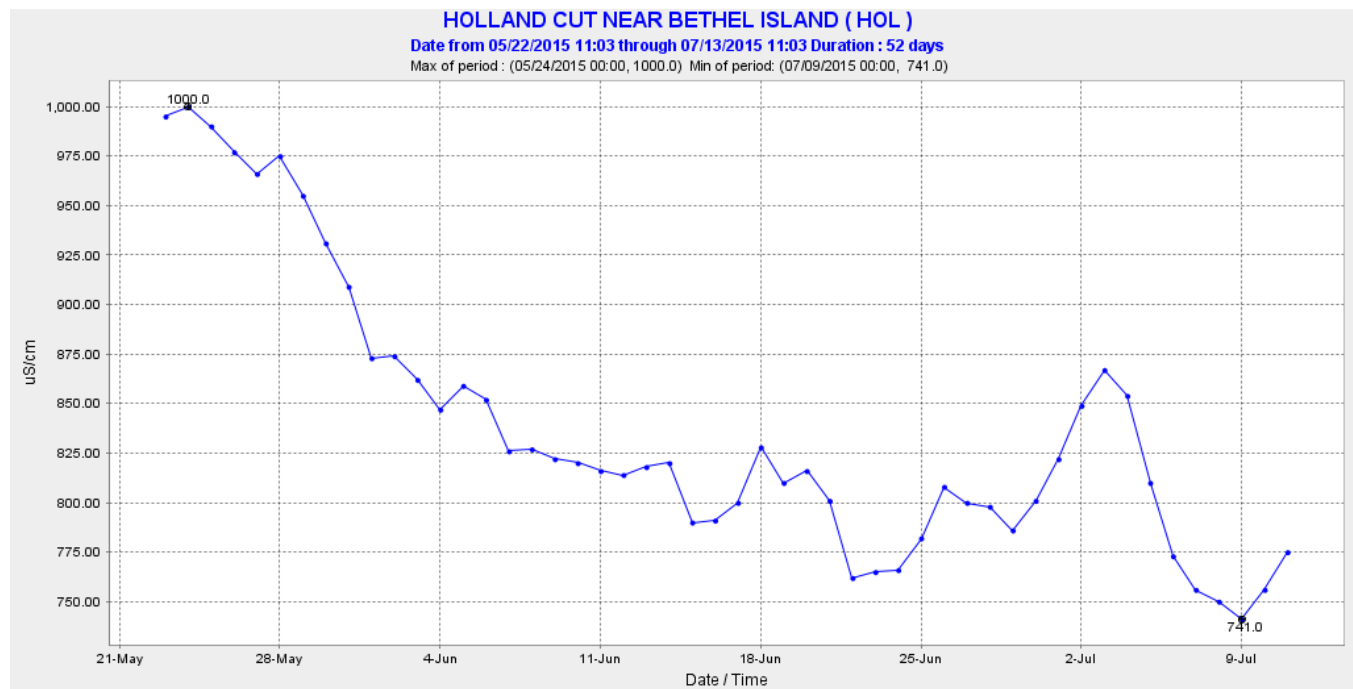
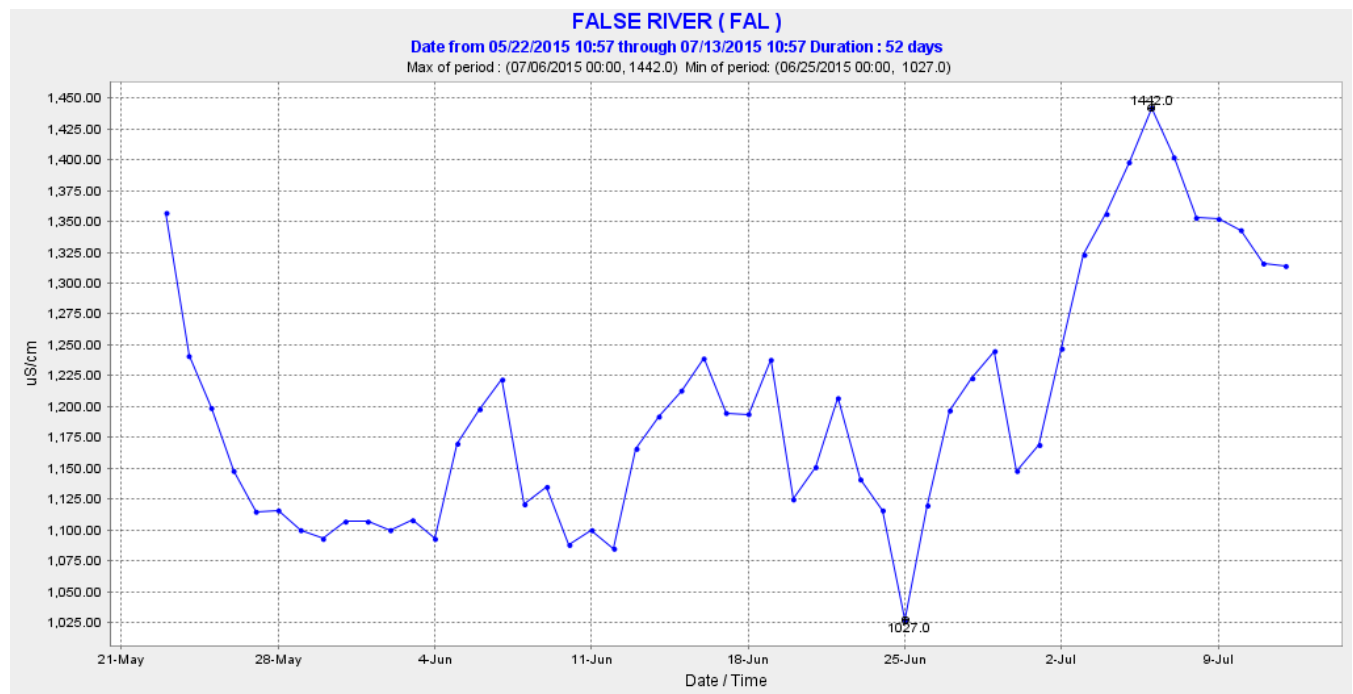
Specific Conductivity

During the past week, average daily specific conductivity (EC) levels trended downward at False River (FAL) from about 1,442 $\mu\text{S}/\text{cm}$ to slightly above 1,300 $\mu\text{S}/\text{cm}$. The FAL station is immediately upstream from the EDB. EC trended downward at the Holland Cut near Bethel Island (HOL) station during the beginning of the week, and then increased during the second half of the week. The daily average EC was very similar on July 6 (773 $\mu\text{S}/\text{cm}$) compared to July 11 (775 $\mu\text{S}/\text{cm}$).

¹ All data in this report and subsequent weekly reports posted to California Data Exchange Network (CDEC) are preliminary and have not yet been validated.

EC decreased at the San Joaquin River at Jersey Point (SJJ) and Dutch Slough at Jersey Island (DSJ) stations. EC decreased from highs observed during the beginning of the week but are now increasing again. The levels fell faster at SJJ along the main stem of the San Joaquin River than at DSJ (2,758 to 2,240 $\mu\text{S}/\text{cm}$, versus 2,156 to 2,050 $\mu\text{S}/\text{cm}$, respectively). Fisherman's Cut (FCT) exhibited a similar drop (trend and magnitude) in EC to SJJ.

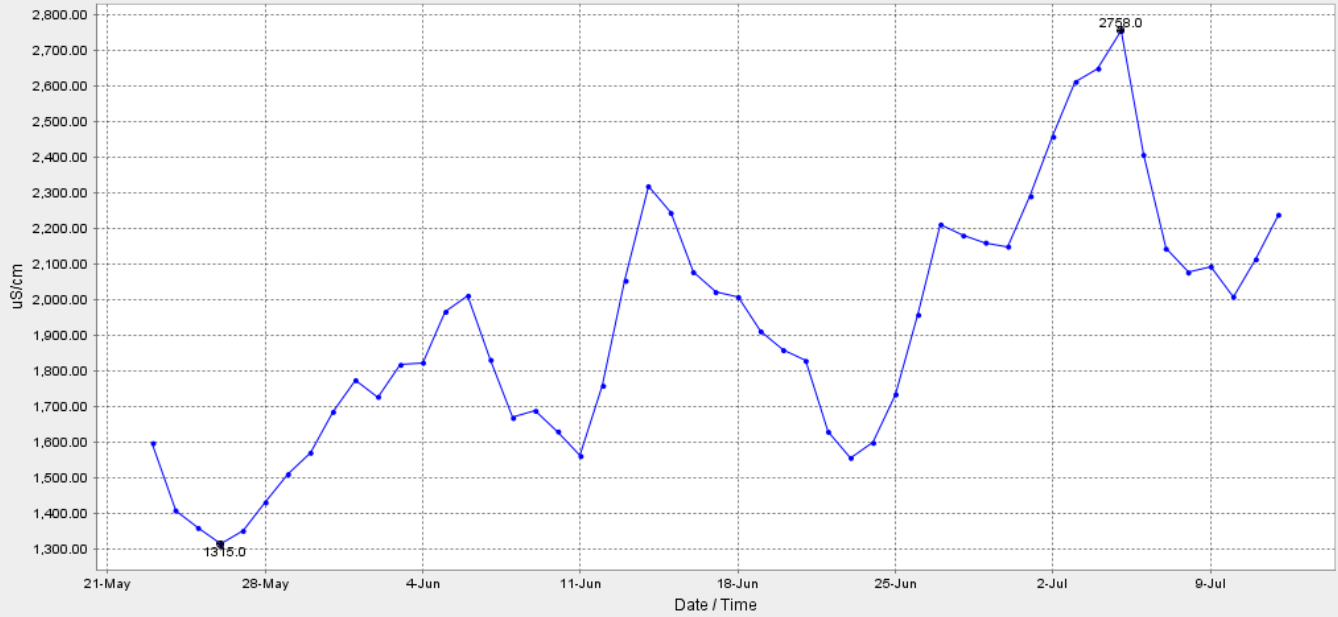
Daily average EC values for five stations in the vicinity of the EDB:



SAN JOAQUIN RIVER AT JERSEY POINT (USGS) (SJJ)

Date from 05/22/2015 11:06 through 07/13/2015 11:06 Duration : 52 days

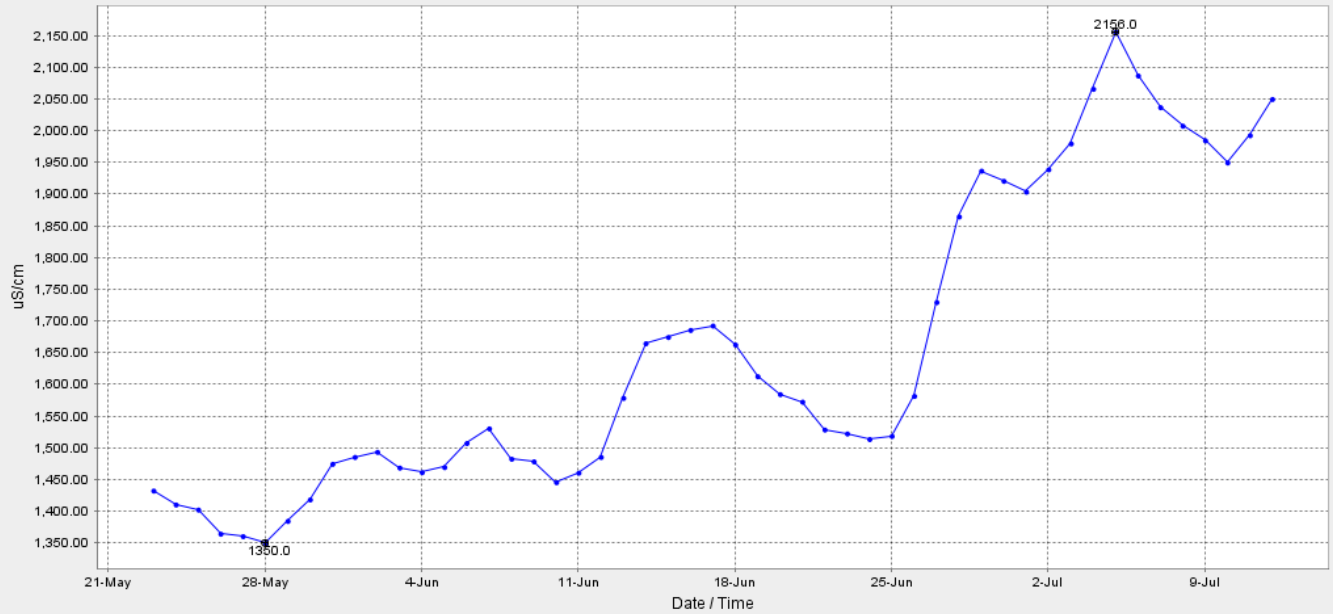
Max of period : (07/05/2015 00:00, 2758.0) Min of period: (05/26/2015 00:00, 1315.0)

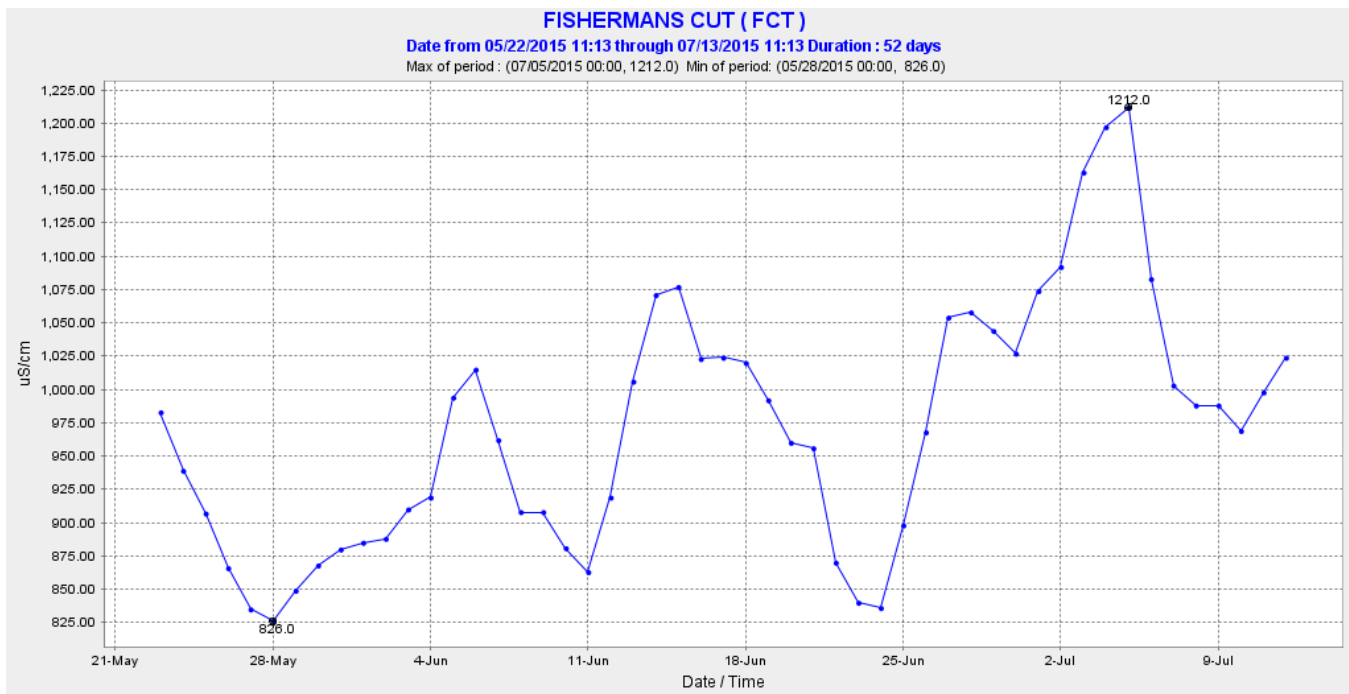


DUTCH SLOUGH AT JERSEY ISLAND (DSJ)

Date from 05/22/2015 11:10 through 07/13/2015 11:10 Duration : 52 days

Max of period : (07/05/2015 00:00, 2156.0) Min of period: (05/28/2015 00:00, 1350.0)

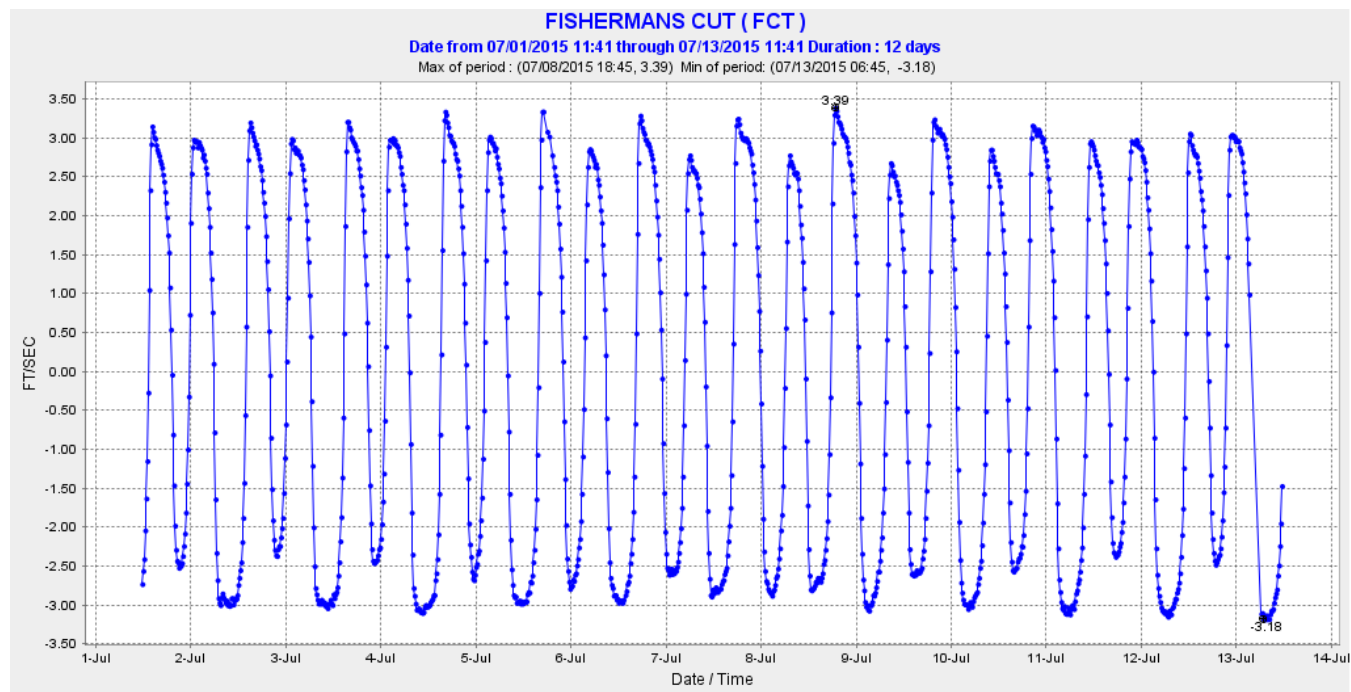




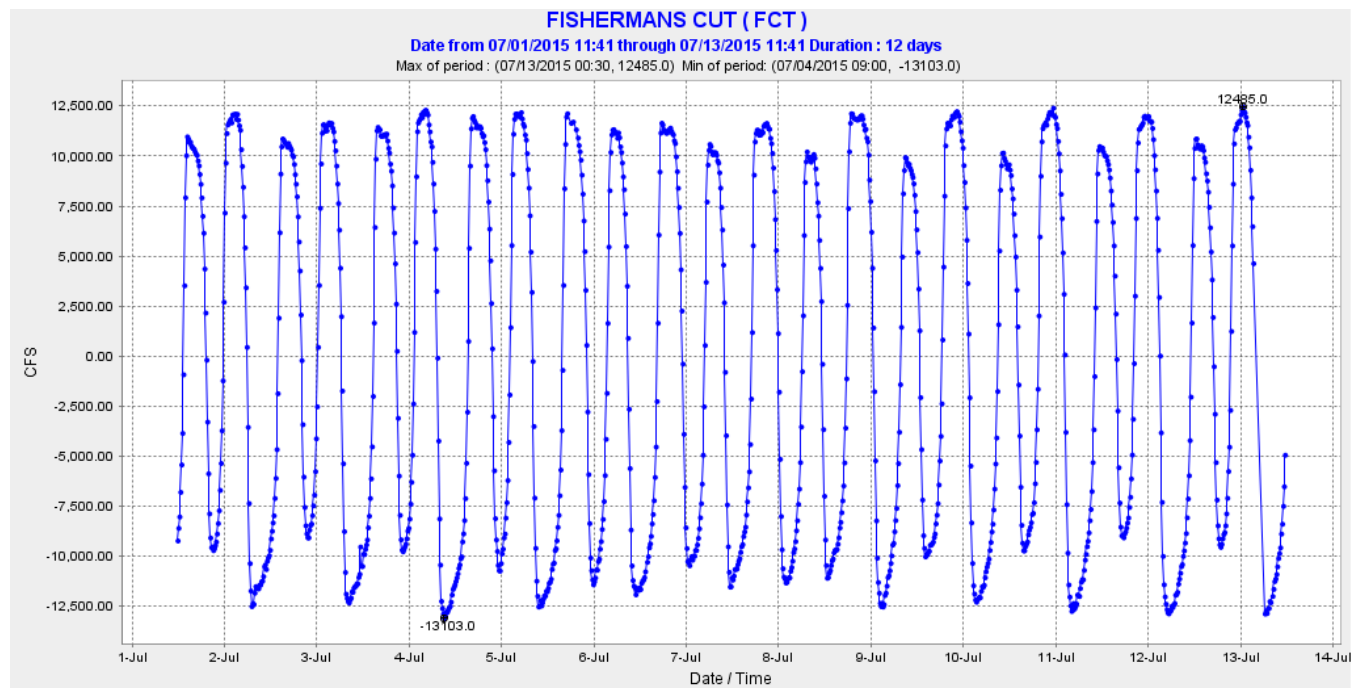
Flow and Velocity

Fisherman's Cut experienced a neap tide during the week of July 6 through July 12. Peak water velocities at the FCT flow station varied between +3.393 ft/s (7/8/15 at 17:45) and – 3.154 ft/s (7/12/15 at 05:45). Negative water velocities, while the barrier is in place, means water is ebbing out of Fisherman's Cut northward into the San Joaquin River. Thus, last week's peak mean water velocity occurred during a flood tide. However, flows varied between +12,485 cfs (7/12/15 at 23:30) and – 12,847 (7/12/15 at 04:15) indicating a higher peak flow during an ebb tide. Peak ebb velocities in Fisherman's Cut generally increased in magnitude through the week while peak flood velocities generally decreased in magnitude. An increase in velocity magnitudes will likely be seen through the middle of next week as the Delta nears a spring tide.

15-Minute velocities for FCT in the vicinity of the emergency drought barrier:



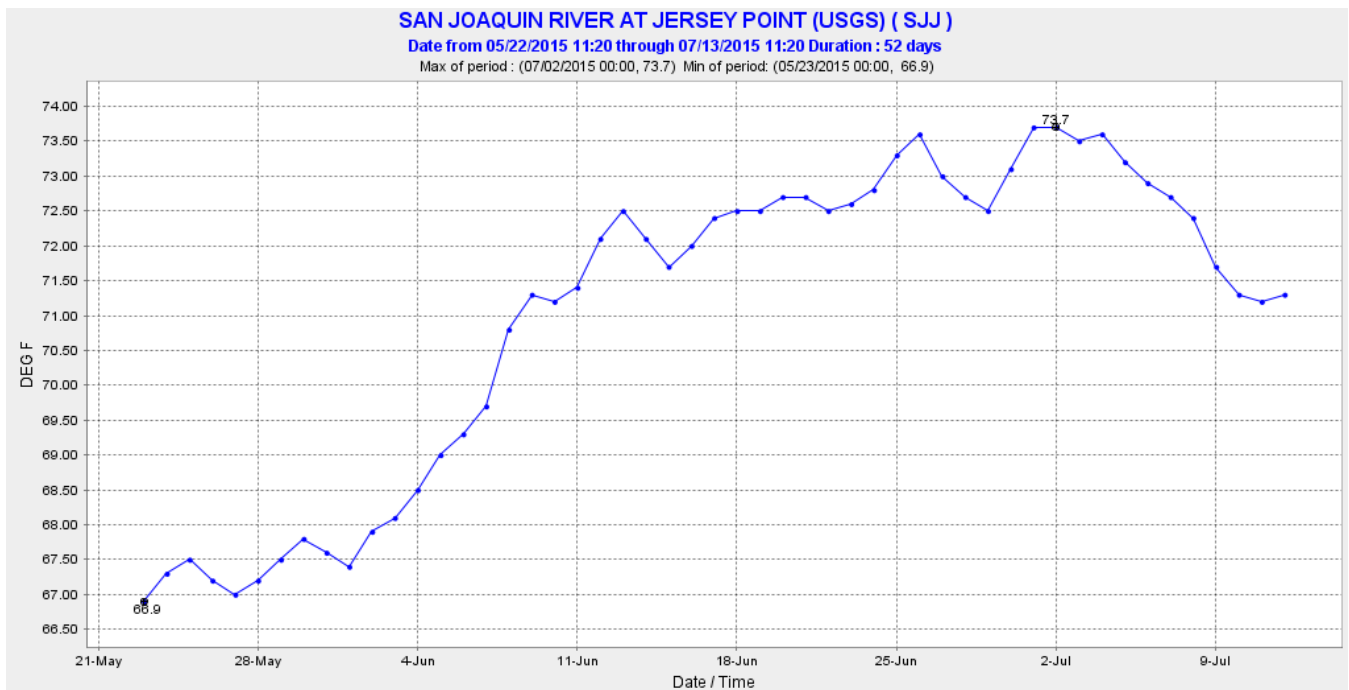
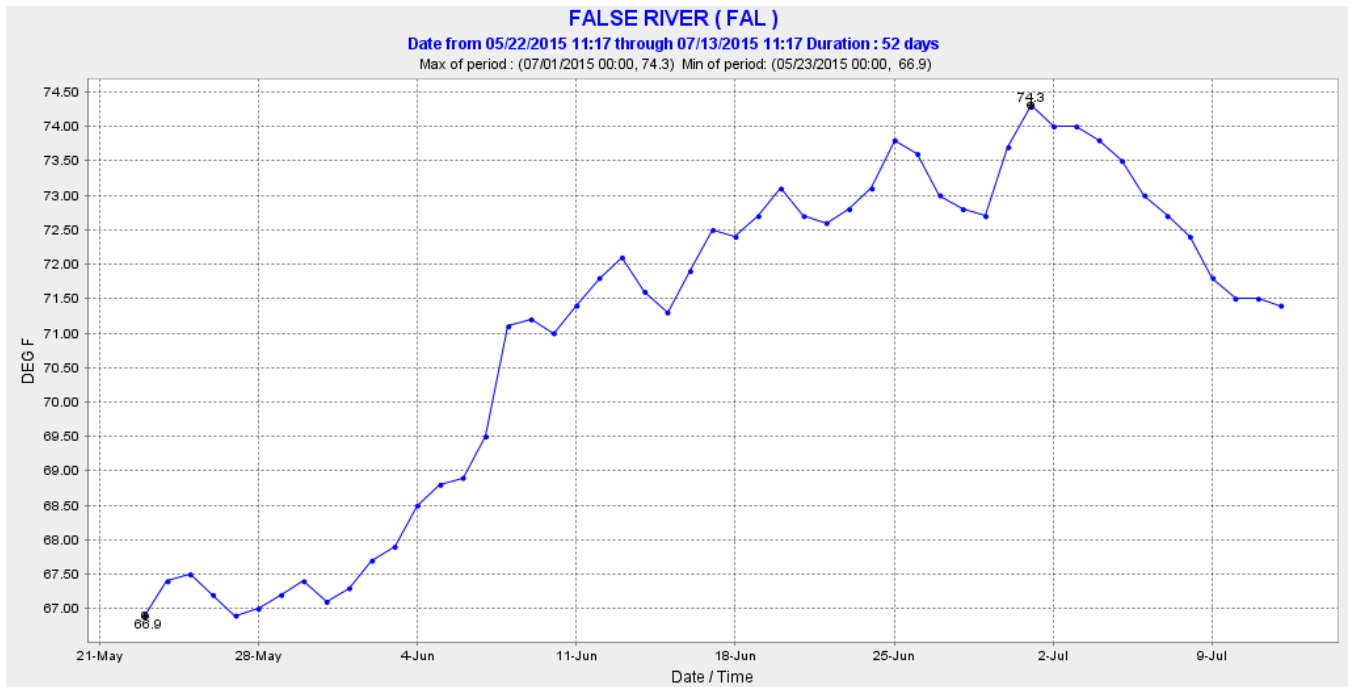
15-Minute flows for FCT in the vicinity of the emergency drought barrier:



Water Temperatures

Temperatures continued on a downward trend during the past week at FAL and SJJ stations.

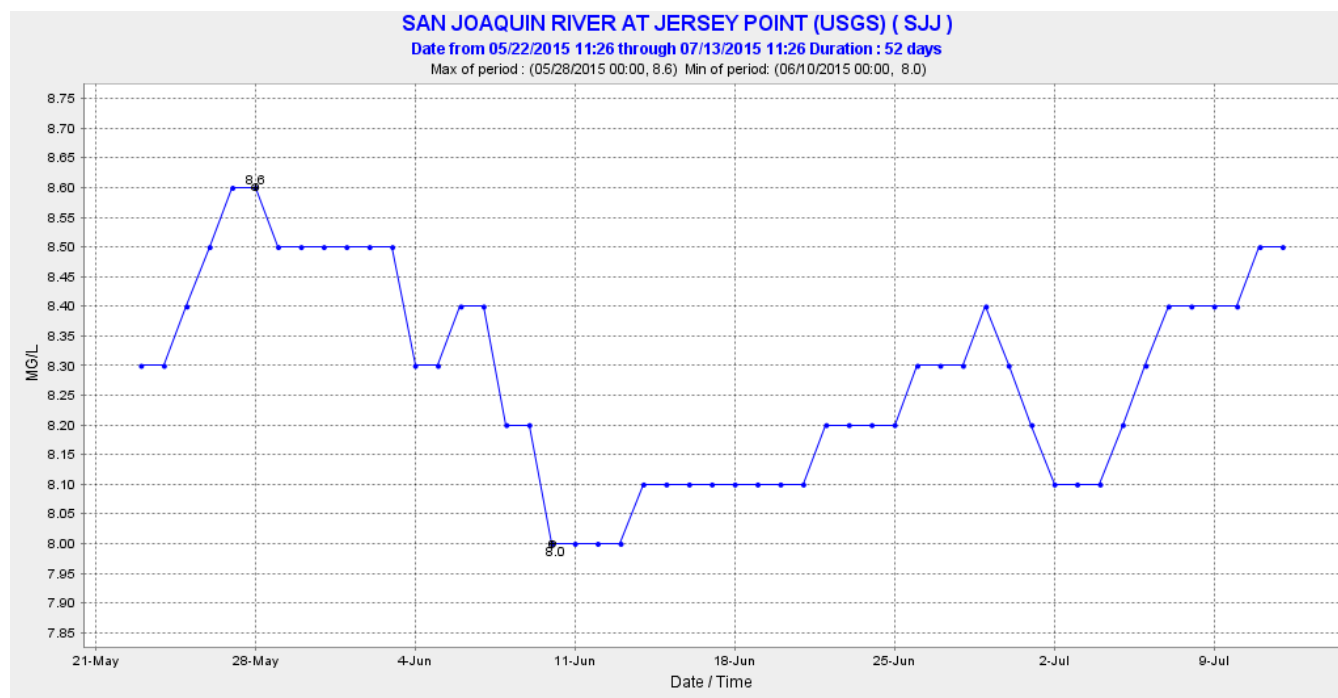
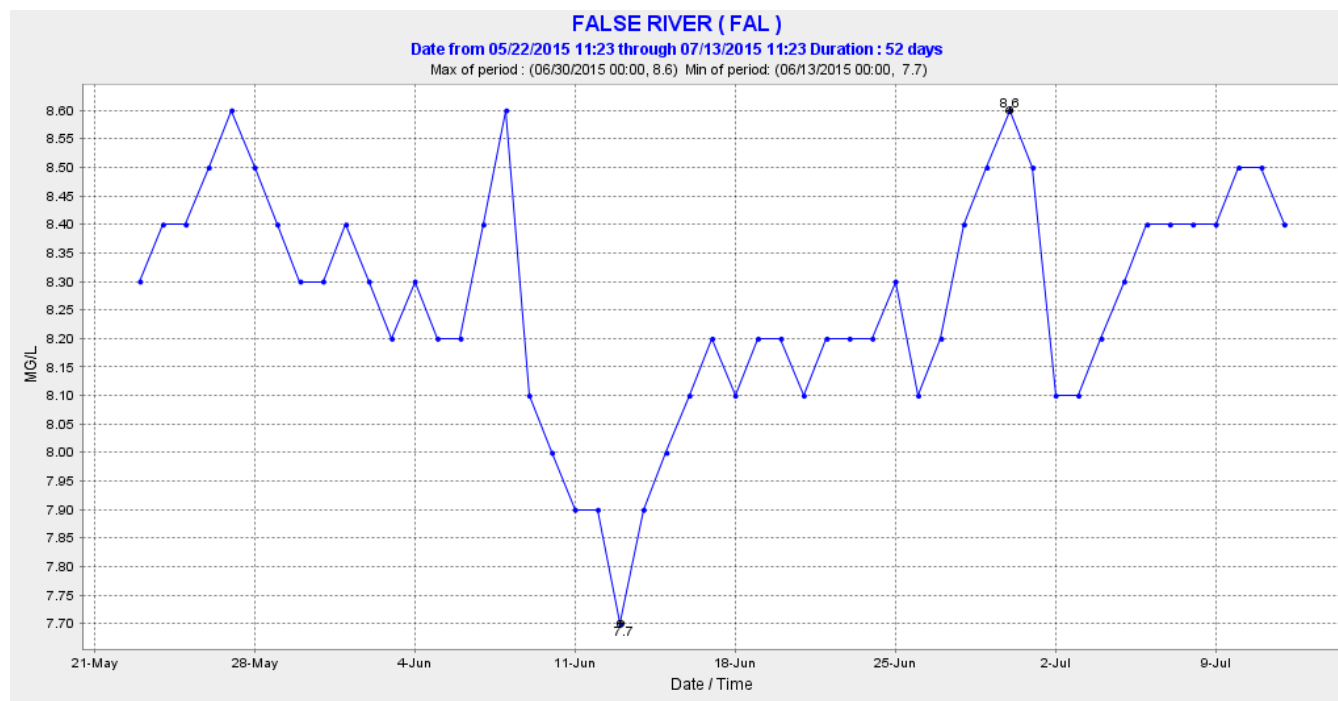
Daily average temperature for stations immediately upstream and downstream of the EDB:



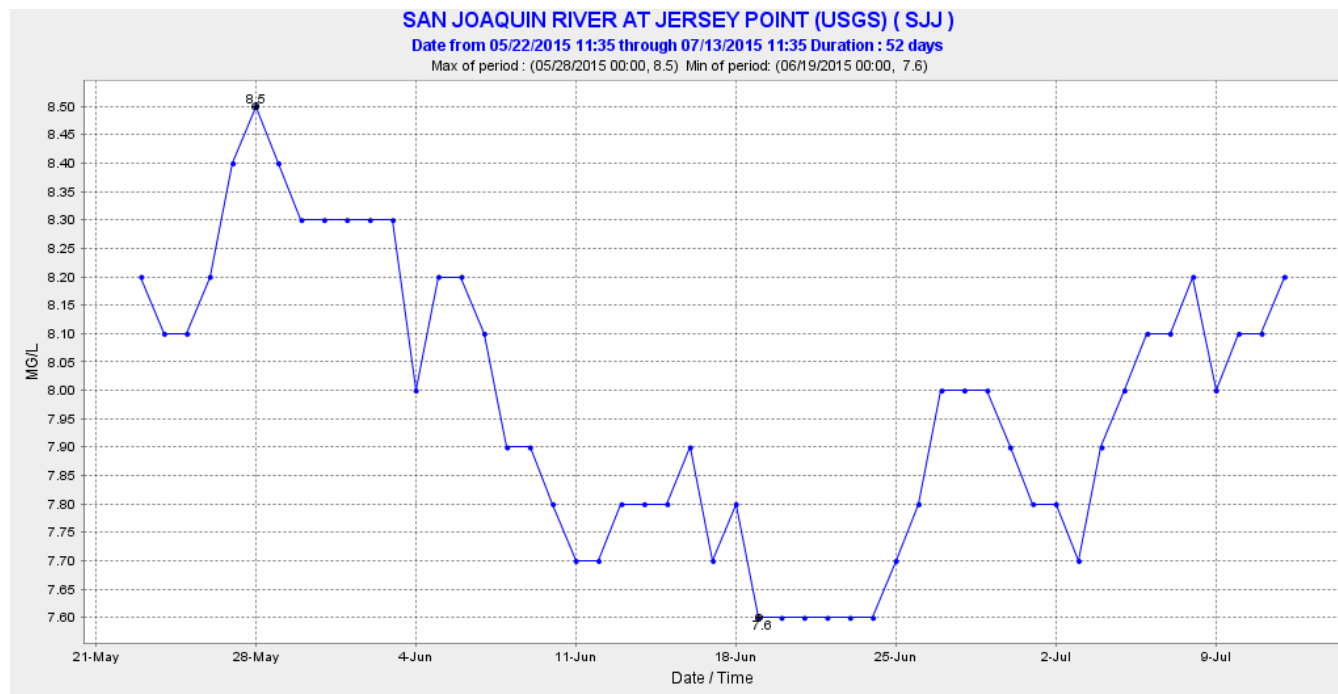
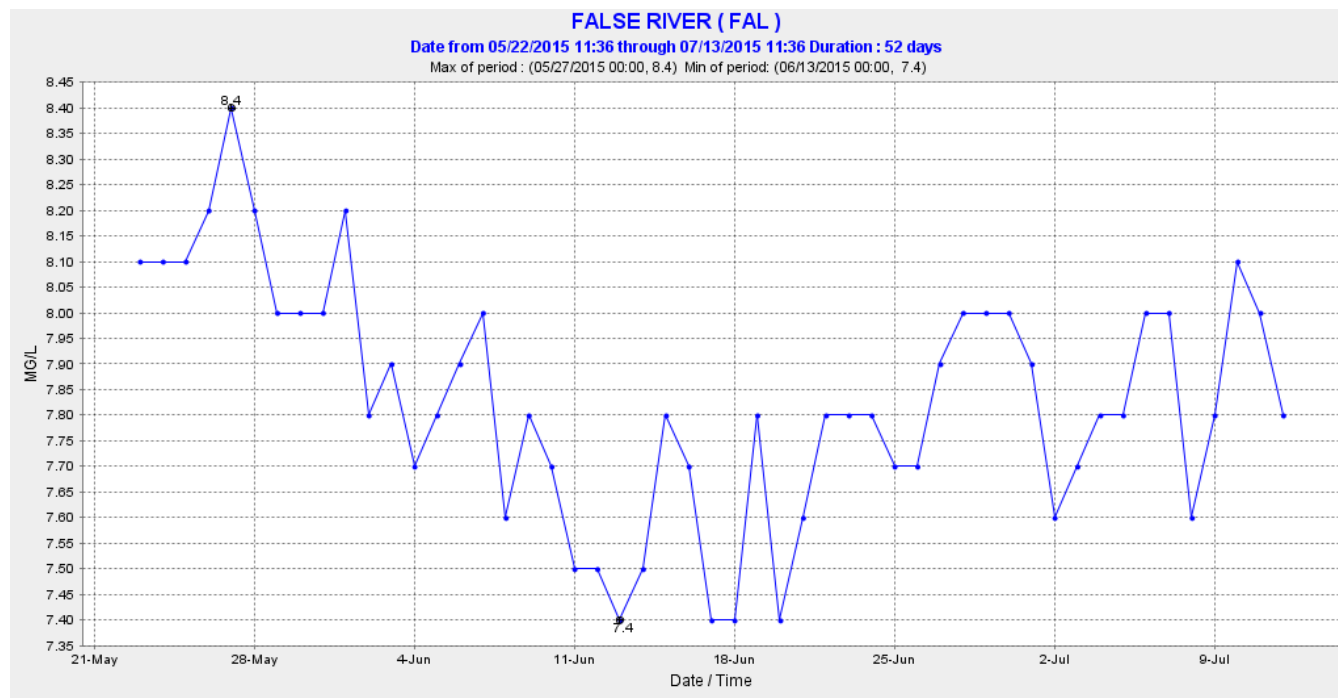
Dissolved Oxygen

Average daily dissolved oxygen (DO) varied only slightly during the week and remained well above 8.0 mg/L at the FAL and SJJ stations. Minimum DO levels for the two stations remained well above the 5.0 water quality criterion for aquatic life, as they have remained since the barrier was installed.

Daily average DO for stations immediately upstream and downstream of the EDB:



Daily minimum DO for stations immediately upriver and downriver of the EDB:



Summary of EC data ($\mu\text{S}/\text{cm}$) by station for the period of July 6 through July 12, 2015.

Station	Mean	Median	Minimum	Maximum	Area
Dutch Slough @ Jersey Island (DSJ)	2016	2040	1570	2480	Dutch Slough
San Joaquin River @ Jersey Point (SJJ)	2155	2040	1110	4480	Vicinity of EDB
Three Mile Slough at San Joaquin River (TSL)	2144	1940	1100	4510	
Fisherman's Cut (FCT)	1011	924	705	1719	
False River (FAL)	1361	1350	1290	1480	
Bethel Island near Piper Slough (BET)	959	949	907	1145	Frank's Tract
Franks Tract Mid (FRK)	861	855	831	915	
Old River near Frank's Tract near Terminous (OSJ)	708	707	588	909	
Holland Cut near Bethel Island (HOL)	764	749	717	1010	
Sacramento River downstream of Isleton (SOI)	431	393	133	1344	North Delta/Cache Slough
Steamboat Slough near Sacramento River (SXS)	240	174	135	657	
Cache Slough @ Ryer Island (RYI)	260	236	205	498	
Liberty Island @ Approx Cntr S End (LIB)	228	221	200	371	
Miner Slough (MIR)	173	144	131	321	
Steamboat Slough downstream of Sutter Slough (SUS)	137	136	130	149	
Miner Slough @ HWY 84 Bridge (HWB)	152	151	146	157	

Mean specific conductance ($\mu\text{S}/\text{cm}$) for the period July 6 through July 12, 2015.

